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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,854	03/06/2002	William E. Blaha	439	8593

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10/08/2002

Joel H. Bock
COOK, ALEX, McFARRON, MANZO,
CUMMINGS & MEHLER, LTD
200 West Adams Street - Suite 2850
Chicago, IL 60606

EXAMINER

NGUYEN, TRUC T

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,854

Applicant(s)

BLAHA, WILLIAM E.

Examiner

Truc T. T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☒ Other: *Examiner's attachments 1 & 2*.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "small ridges 65" and "rounded ridges 67". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1 and 10 are objected to because of the following informalities:

Claim 1, line 3, cites "a receptacle". It is unclear that whether the applicant intends to refer to the same "receptacles" as cited in line 2.

Claim 10, line 2, cites "a conductor". It is unclear that whether the applicant intends to refer to the same "conductor" as cited claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 17 recites the limitation "the first edge" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-13, 15, 17 and 20 are rejected under 35 U.S.C. 102(b) as being unpatentable over Hartmann et al (US 5,975,940).

Regarding claims 1-3 and 13, Hartmann et al. disclose a push-in connector for connecting electrical conductors (27), comprising:

a housing including a case (4) and a cap (5) attached to one another defining an enclosure and having a plurality of entry ports (6) formed in the cap and a receptacle (defined by blind-hole 8 and wall 23, column 3, lines 20-23) formed in the case for receiving the conductors inserted through the entry ports, each of the receptacles aligned with each of the entry ports;

a conductive bus bar (10) mounted to the housing in the enclosure between the entry ports and the receptacle; and

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a pressure spring (12) mounted to the housing in the enclosed and engageable with electrical conductors inserted therein, the pressure spring being adapted to bias the electrical conductor into electrical engagement with the bus bar.

Regarding claim 4, Hartmann et al. disclose the busbar (10) having a rear edge supported in the case and a front edge supported in the cap (see Figure 1).

Regarding claims 5 and 17, Hartmann et al. disclose the cap having plurality of retainer lugs (E1, see examiner's attachment 1) and a first edge of the busbar engaging the lug to retain the first edge in a fixed position in the housing (see Figures 1 and 3).

Regarding claim 6, Hartmann et al. disclose the busbar having an angled edge (11) such that a conductor insert into a receptacle will contact the busbar in at least two points (see Figure 3).

Regarding claim 7, Hartmann et al. disclose the cap has a front portion (E3, see Examiner's attachment 1) and a telescoping portion (E4, see Examiner's attachment 1), the telescoping portion fitting inside the case.

Regarding claim 8, Hartmann et al. disclose the entry ports formed in the front block comprises a cylindrical saddle portion (E5, see Examiner's attachment 1) and a conical guide portion (E6, see Examiner's attachment 1).

Regarding claim 9, Hartmann et al. disclose the front block defining a recess (retainer the lug E1 and the angled edge E2) for receiving the pressure spring.

Regarding claim 10, Hartmann et al. disclose the front block defining an angled wall (E2, see Examiner's attachment).

Regarding claim 15, Hartmann et al disclose the plurality of receptacles formed in the case, each of the receptacles being aligned with one of the plurality of entry ports, and at least a portion of the pressure spring and the busbar being mounted intermediate the receptacles and the entry ports.

Regarding claim 20, Hartmann et al disclose a plurality of retention tabs (E8, E9, see Examiner's attachment 1) and a plurality of retention slots (E10, E11, see Examiner's attachment 1) formed in the cap and the case respectively to hold the cap and the case together.

8. Claims 13, 14 and 16 are rejected under 35 U.S.C. 102(b) as being unpatentable over Tozuka (US 5,454,730).

Regarding claim 13, Tozuka discloses a push-in connector (10) for connecting electrical conductors (2), comprising:

- a housing including a case (11) and a cap (12) attached to one another and defining an enclosure, the cap having a plurality of entry ports (13) which provide access to the enclosure;

- a conductive bus bar (21) having first and second edge (B2, B3 see Examiner's attachment 2) being supported in the case and the cap respectively.

- a pressure spring (22) mounted to the housing in the enclosure and engageable with electrical conductors inserted therein, the pressure spring being adapted to bias the electrical conductor into electrical engagement with the bus bar.

Regarding claim 14, Tozuka discloses the pressure spring comprising a base plate (35) having a first edge and a second edges (B7, 32 see Examiner's attachment) being supported in the case and the cap respectively (see Figure 1).

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Regarding claim 16, Tozuka discloses a projection (40) formed in the case for engaging the first edge of the base plate to retain the first edge in a fixed position in the housing.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Hartmann et al teaches

10. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US5,975,940) in view of Beege et al. (US 6,280,233 B1) and Wang (US 6,093,052).

Hartmann et al. disclose a push-in connector for connecting an electrical conductor (2), comprising:

a housing (4, 5) defining an enclosure and having a plurality of entry ports (6) providing access to the enclosure, the housing further including a plurality of receptacles (defined by blind-hole 8 and wall 23, column 3, lines 20-23), each of the receptacles aligning with each of the entry ports;

at least one projection (E1, see Examiner's attachment) extending into the enclosure;

an electrically conductive bus bar (10) fixedly mounted in the housing; and

a pressure spring (12) mounted in the housing having a base plate (12) engaging the projection to retain the base plate in a fixed position in the housing, a leg (18) being positioned opposite the entry ports and being flexibly movable such that the legs are deflected when

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electrical conductor are inserted into the housing, the pressure spring being adapted to bias the electrical conductor into electrical engagement with the bus bar.

Hartmann et al. does not disclose the pressure spring having a plurality of legs cantilevered from the base plate, and the pressure spring being spaced from the busbar such that no part of the pressure spring contacts the busbar.

Beege et al suggested a pressure spring (3) having a plurality of legs (3b) cantilevered from base plate (3a).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a pressure spring with plurality of legs cantilevered from the base plate into Hartmann et al.'s connector, as suggested by Beege et al for the purpose effectively withdraw an associated conductor independently (column 4, lines 39-46).

Wang suggests a push-in connector having a pressure spring (2) being spaced from a busbar (3) in such a way that no part of the pressure spring contacts the busbar (see Figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hartmann et al.'s connector with the pressure spring being spaced from a busbar in such a way that no part of the pressure spring contacts the busbar, as suggested by Wang, for the purpose of preventing contact damage during transportation.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tozuka (US 5,454,730) in view of Wang (US 6,093,052).

Tozuka discloses the pressure spring having a base plate (35) and at least two flexible legs (31).

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Tozuka substantially disclose the claimed invention except for the pressure spring being spaced from the busbar in such a way that no part of the pressure spring contacts the busbar.

Wang suggested a push-in connector having a pressure spring (2) being spaced from a busbar (3) in such a way that no part of the pressure spring contacts the busbar (see Figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tozuka's connector with the pressure spring being spaced from a busbar in such a way that no part of the pressure spring contacts the busbar, as suggested by Wang for the purpose of preventing contact damage during transportation.

12. Claim 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tozuka (US 5,454,730) in view of Wang (US 6,093,052) as applied in claim 18 above, and further in view of Hartmann et al. (US5,975,940).

Tozuka in view of Wang substantially disclose the claim invention except for the housing having a plurality of receptacles being aligned with the plurality of entry ports.

Hartmann et al. teach a housing (4, 5) defining an enclosure and having a plurality of entry ports (6) providing access to the enclosure, the housing further including a plurality of receptacles (defined by blind-hole 8 and wall 23, column 3, lines 20-23), each of the receptacles aligning with each of the entry ports.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tozuka's housing with a plurality of receptacles being align with the entry ports, as taught by Hartmann et al., for the purpose of reducing electromagnetic interference between conductors.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Truc T. T. Nguyen whose telephone number is 703-306-4004. The examiner can normally be reached on 8:30-5:00.

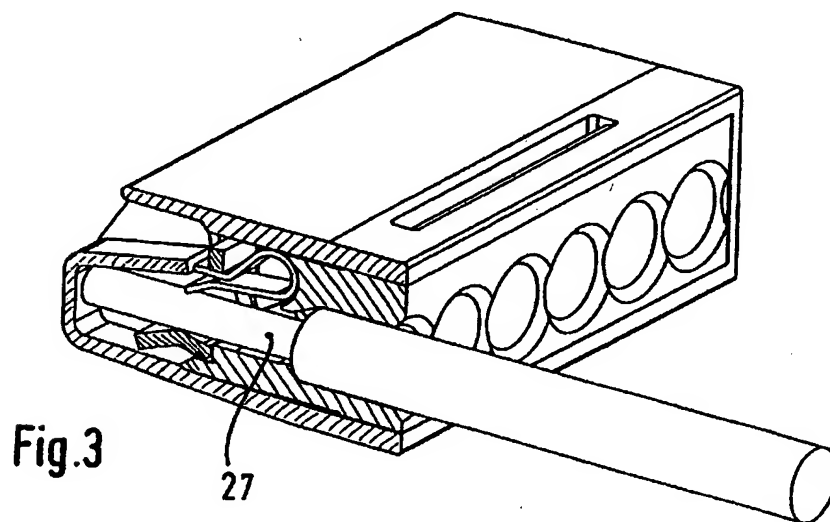
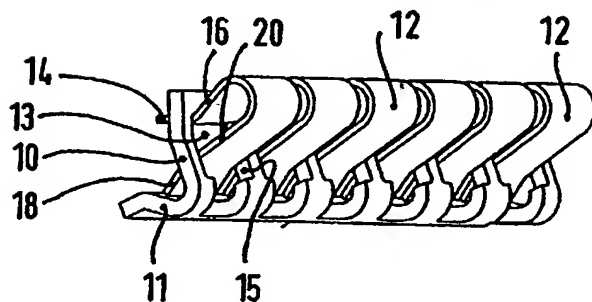
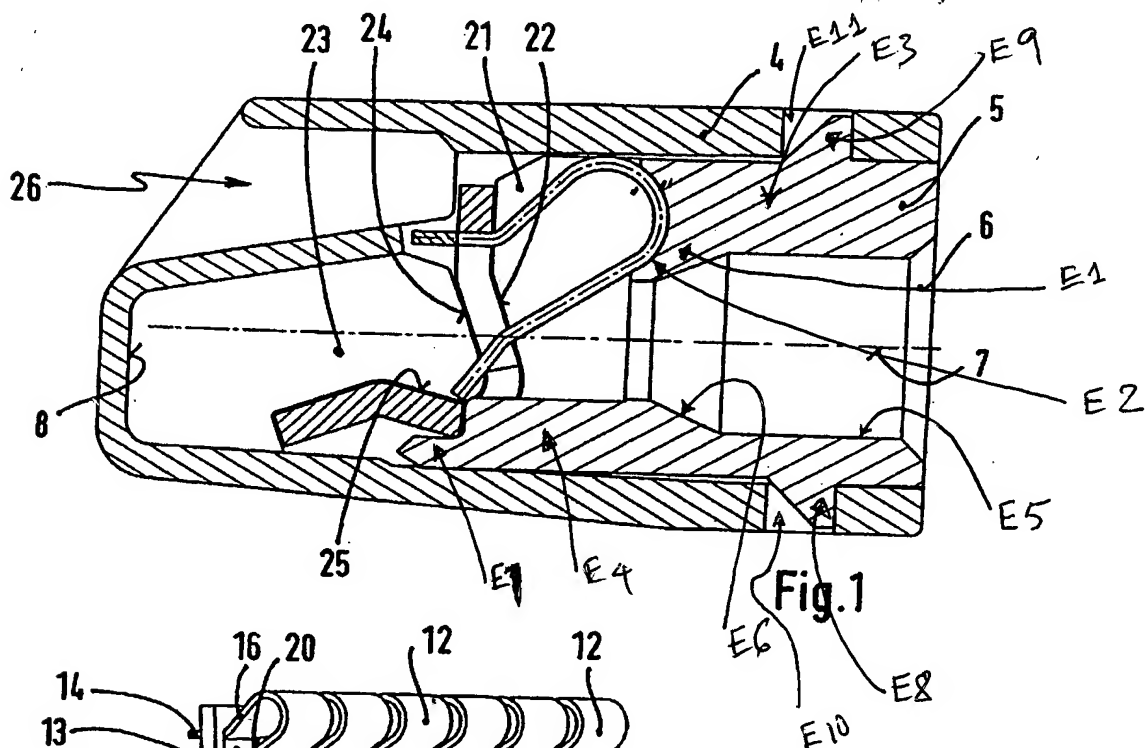
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on 703-308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'T. Nguyen', is written over a horizontal line.

T. Nguyen
September 30, 2002

EXAMINER'S ATTACHMENT 1



EXAMINER'S ATTACHMENT 2

FIG.3B

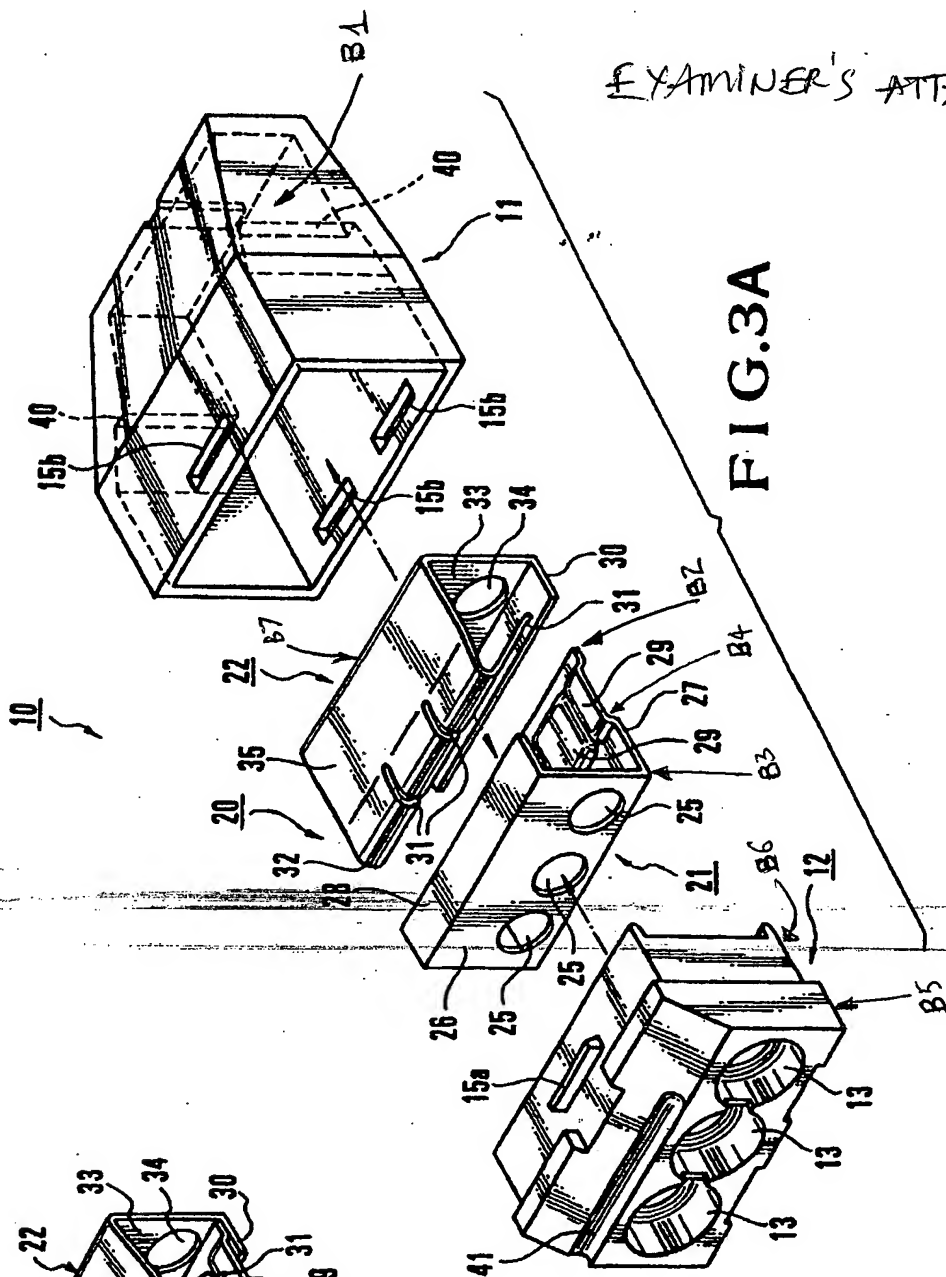
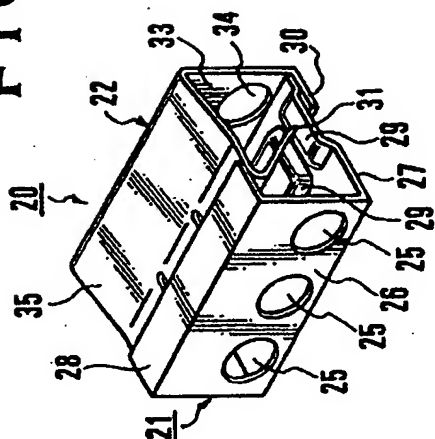


FIG.3A